User Manual

Wireless-N USB Dongle

Model: WNUD1150

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1 USING THIS DOCUMENT

This document provides detailed user guidelines for WNUD1150 Wireless LAN USB Dongle operation and setting-up. Though every effort has been made to ensure that this document is up date and accurate, more information may have become available subsequent to the production of this guide.

2 INTRODUCTION

Thank you for purchasing WNUD1150 Wireless LAN USB Dongle. WNUD1150 Wireless LAN USB Dongle is a perfect combination of both performance and cost-effective product introduced. It is sincerely hoped that you can enjoy the wireless world through this solidly profiled wireless dongle.

It provides full solutions of all the IEEE 802.11 b/g/n protocol, that it was passed the WiFi tests and it is compatible with all the wireless products with WiFi logo. If you have a Wireless LAN USB Dongle on hand, it means you can connect to the wireless world without any difficulty.

It also provides all the data rates in the IEEE 802.11 b/g/n standards, with both short and long preambles to ensure the compatibility of legacy wireless products and new ones, saving the panic works for end users to find compatible products.

Since the security issue has become one of the most important one in the wireless society, it provides you with the full security coverage from the 64/128bits WEP encryptions, second generation WPA-PSK encryption, to the most advanced WPA2-AES encryption. WPA2 is the latest security standard currently approved by WiFi standards.

Saving mode, Ad hoc wireless LAN, Wake on LAN (WOL) and other exciting features are also included in this Wireless LAN USB Adapter. This user manual will guide you through these exciting features in the following chapters and we is believed that you will be greatly satisfied with its performance and ease of use.

3 SYSTEM REQUIREMENTS

Windows System: Windows 98SE, Me, 2000, XP 32/64 bit, Vista 32/64 bit, WIN7 32/64 bit. PCs must have a device driver installed. It allows you to communicate with WNUD1150 WLAN USB Dongle.

4 Driver Installation and Uninstallation for WNUD1150

Warning! Do not cover or block the airflow to the dongle WNUD1150. The dongle will reach a high temperature during use.

4.1 Driver Installation

Before you proceed with the installation, please notice the following descriptions.

Notes1:
The following installation of WNUD1150 was operated under Windows 7.
(Procedures are similar for Windows 98SE/Me/XP/2000/vista.)

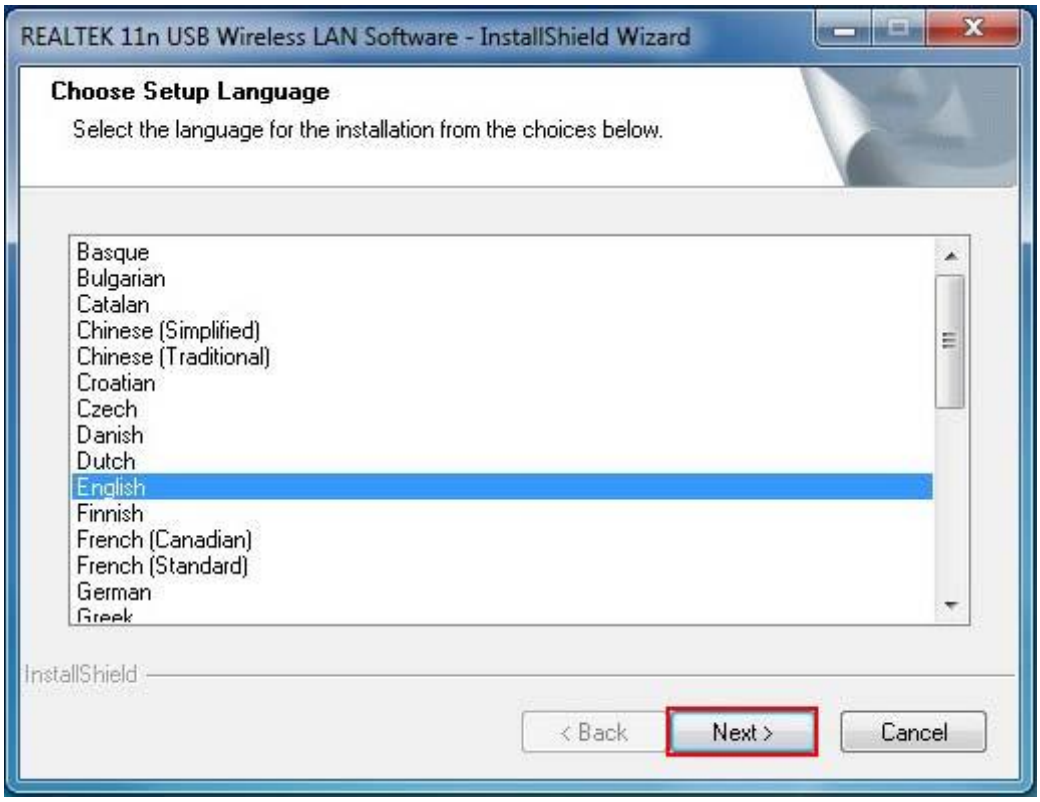
Notes2:
If you have installed the WNUD1150 WLAN USB driver & utility before, please uninstall the old version first.

Do not plug the wireless LAN USB dongle into your computer USB port before installing the software program

Insert the software program WNUD1150 CD, then auto installation window pops up on following:

Step1: While the following screen pops out, click Driver Installation or browser the CD, click setup.exe

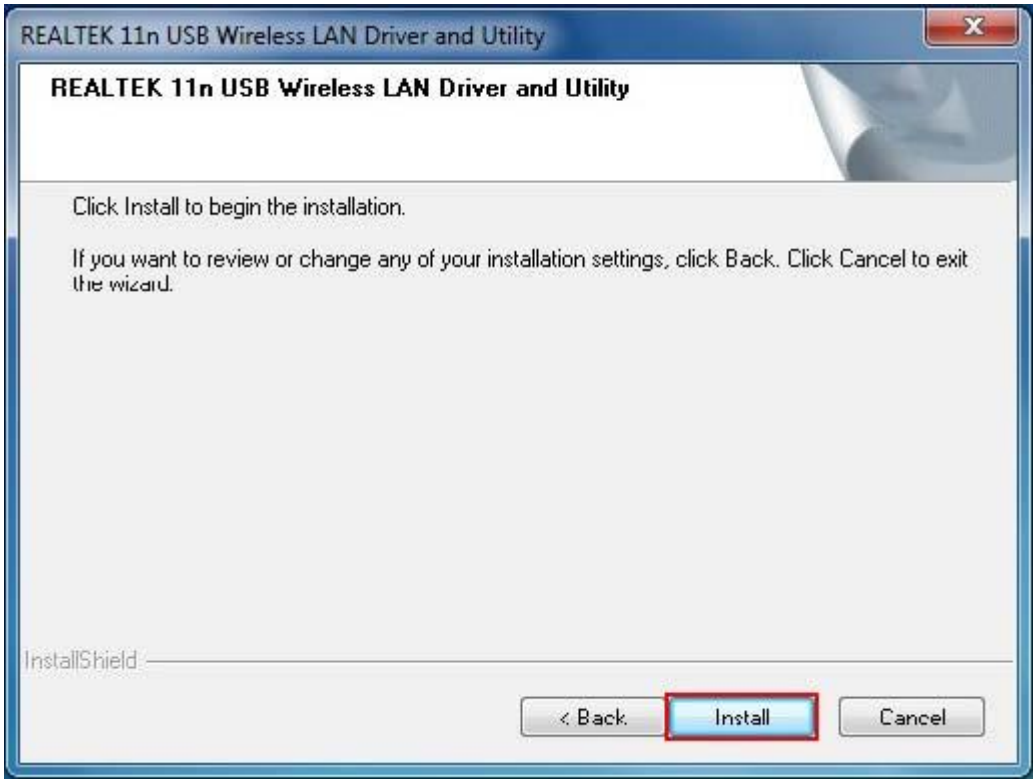
Step2: Choose a setup language. Click Next to process the installation.



Step3: Click Next

REALTEK 11n USB Wireless LAN Driver and Utility
REALTEK 11n USB Wireless LAN Driver and Utility
The InstallShield Wizard will install REALTEK 11n USB Wireless LAN Driver and Utility on your computer. To continue, click Next.
< Back
Next >
Cancel

Step4: Click Install

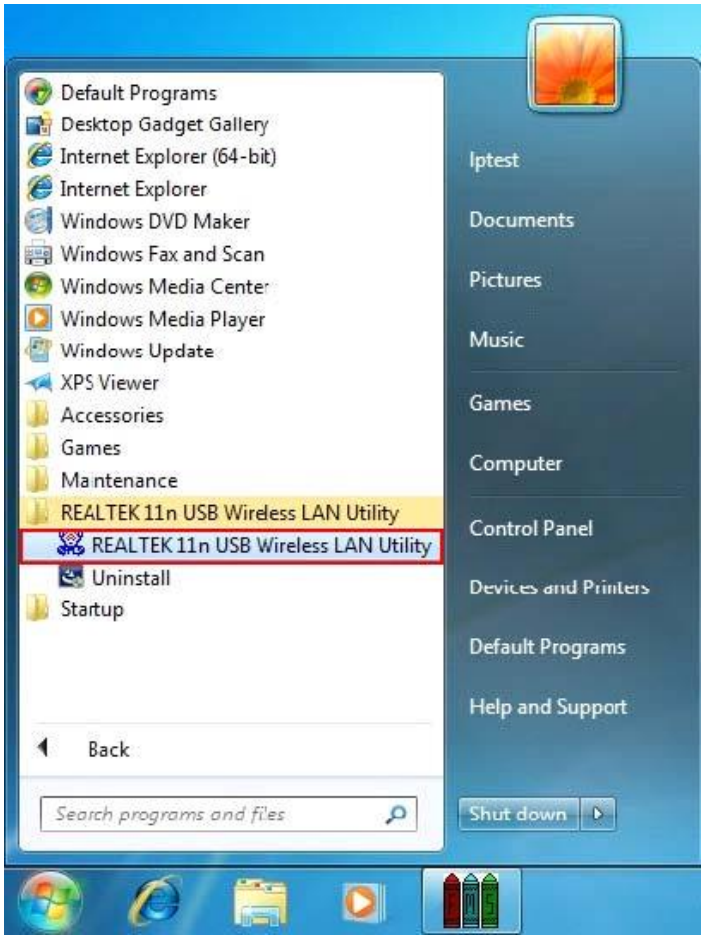

REALTEK 11n USB Wireless LAN Driver and Utility
REALTEK 11n USB Wireless LAN Driver and Utility
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

The system starts software installation of the WNUD1150 WLAN USB dongle.

Step5: Click Finish to complete the installation.

REALTEK 11n USB Wireless LAN Driver and Utility
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed REALTEK 11n USB Wireless LAN Driver and Utility. Before you can use the program, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
< Back
Finish
Cancel

After click Finish to complete the installation of WNUD1150, under Windows7 <ALL Programs> menu, REALTEK 11n USB wireless LAN Utility program will be installed.

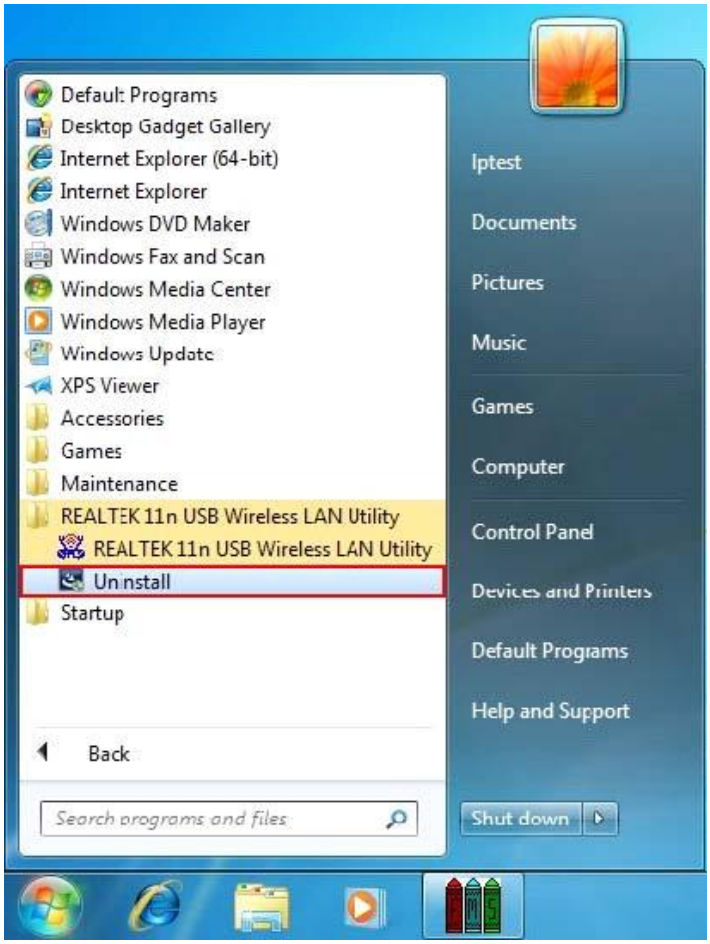


Realtek Utility shortcut will be on the desktop.

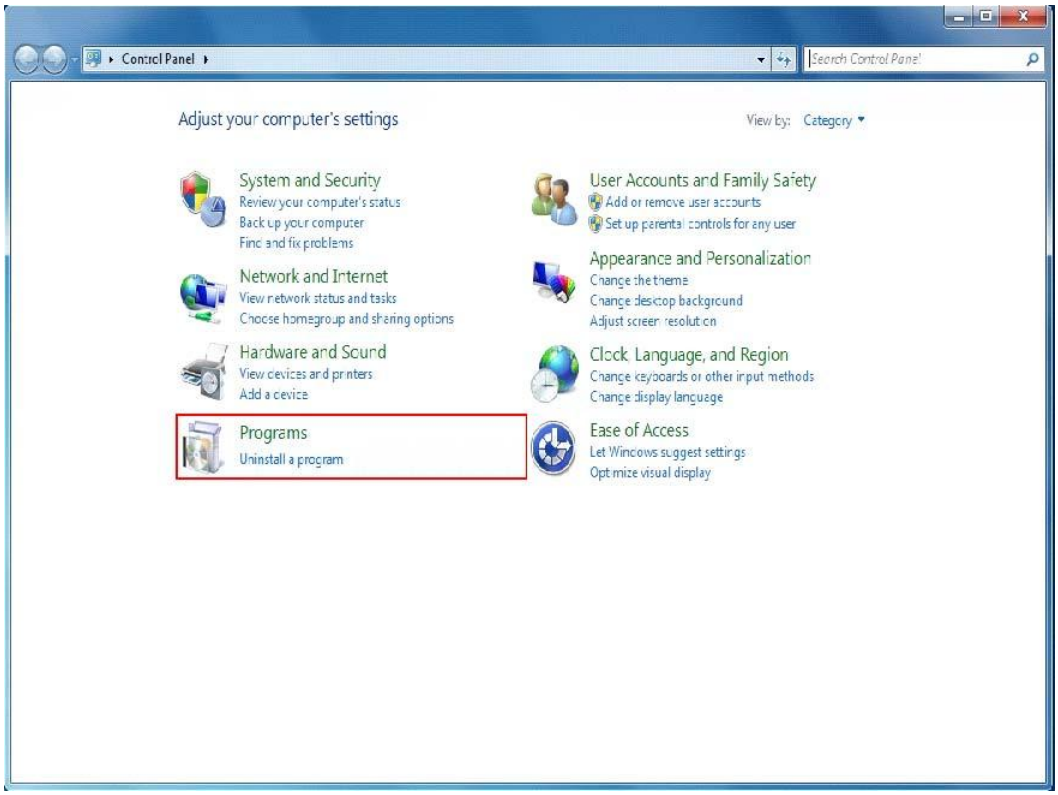
Insert the WNUD1150 wireless LAN USB dongle into your computer USB port, the computer detected and active the wireless LAN USB dongle automatically.

4.2 Driver Uninstallation of WNUD1150

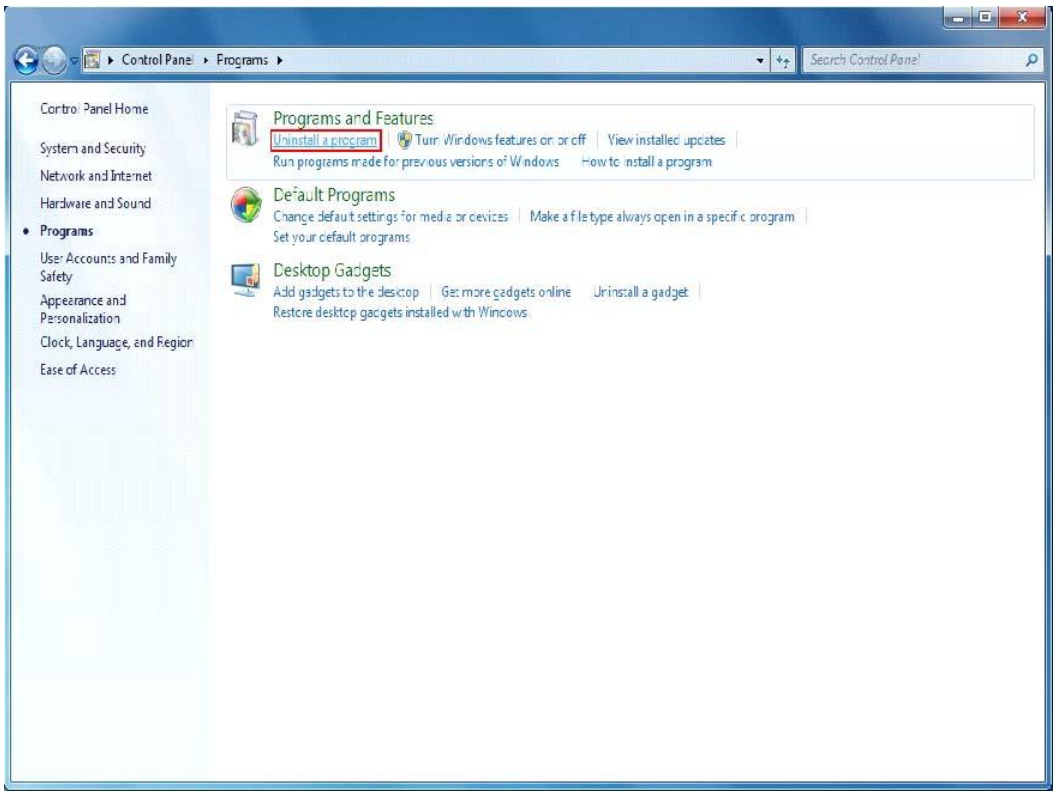
Step1:
Uninstall the WNUD1150 WLAN USB Dongle Driver from "Start">"All Programs" >"REALTEK 11n USB Wireless LAN Utility">Click "Uninstall" to remove Wireless LAN USB Dongle driver.



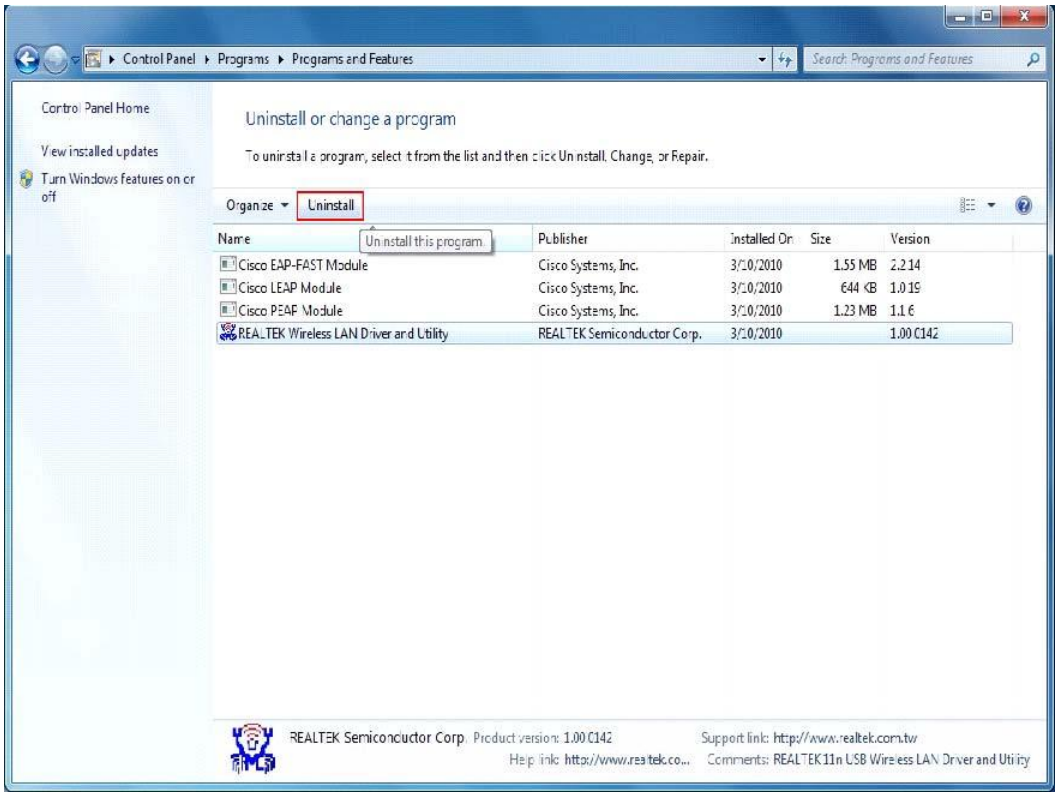
Open Control Panel and click Programs.



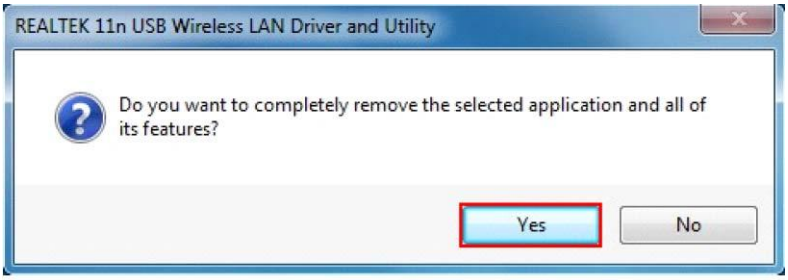
Click Uninstall a program



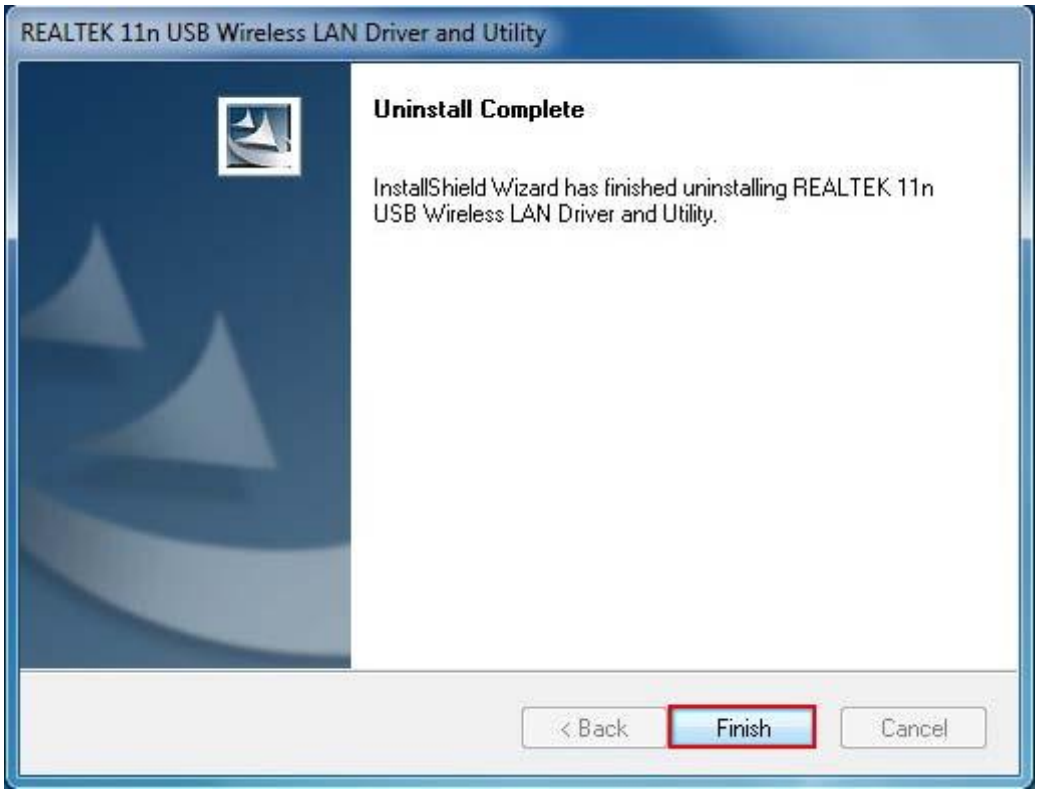
Select REALTEK Wireless LAN Driver and Utility Click Uninstall



Step2: Click Yes.

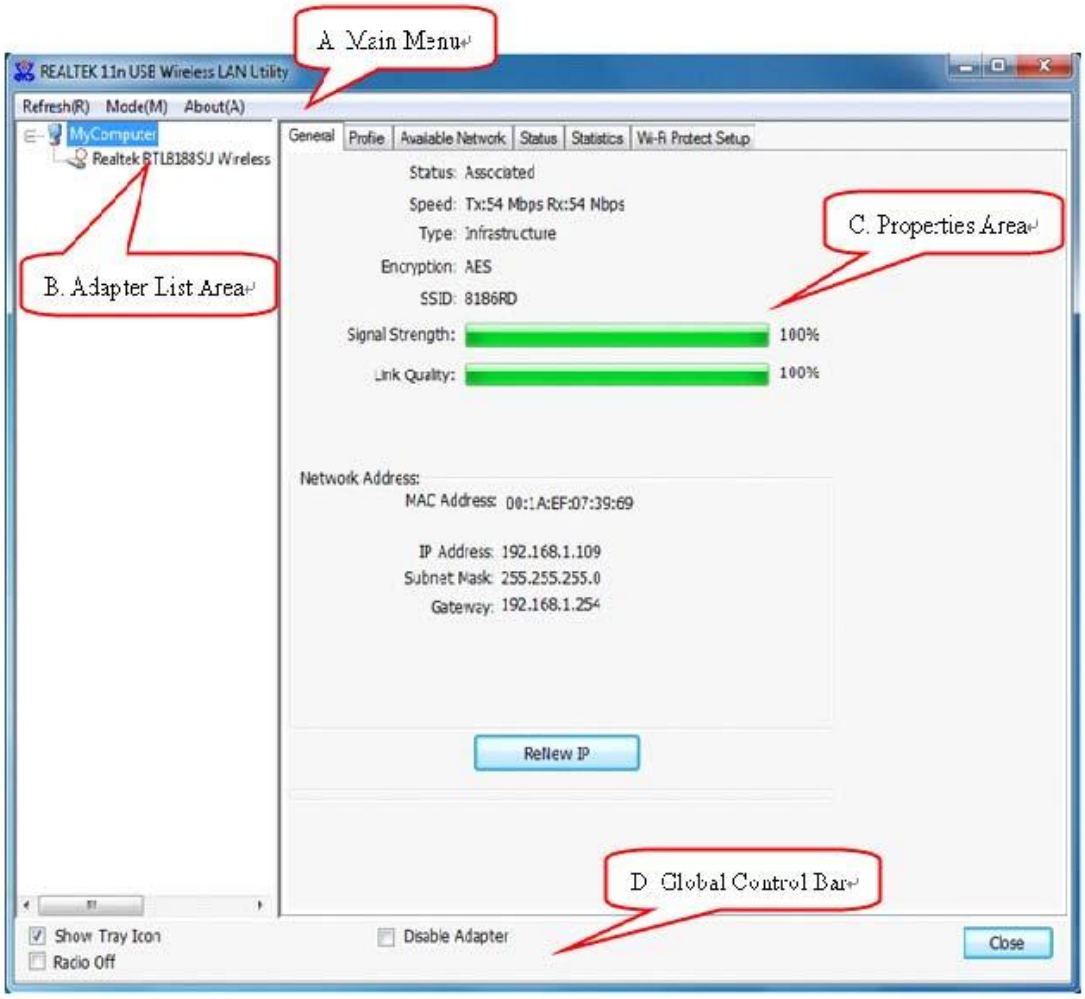

REALTEK 11n USB Wireless LAN Driver and Utility
Do you want to completely remove the selected application and all of its features?
Yes
No

Step3: Click Finish to complete the uninstallation of WNUD1150. And restart computer.


REALTEK 11n USB Wireless LAN Driver and Utility
Uninstall Complete
InstallShield Wizard has finished uninstalling REALTEK 11n USB Wireless LAN Driver and Utility.
< Back
Finish
Cancel

5 Wireless LAN Management GUI

Introduction of Main Window



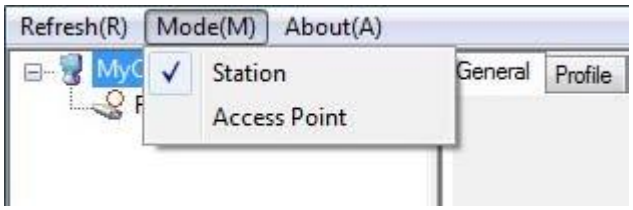
A. Main Menu

1. Refresh (R)

When clicking the refresh menu, you can update and re-enumerate the contents of dongle list area.

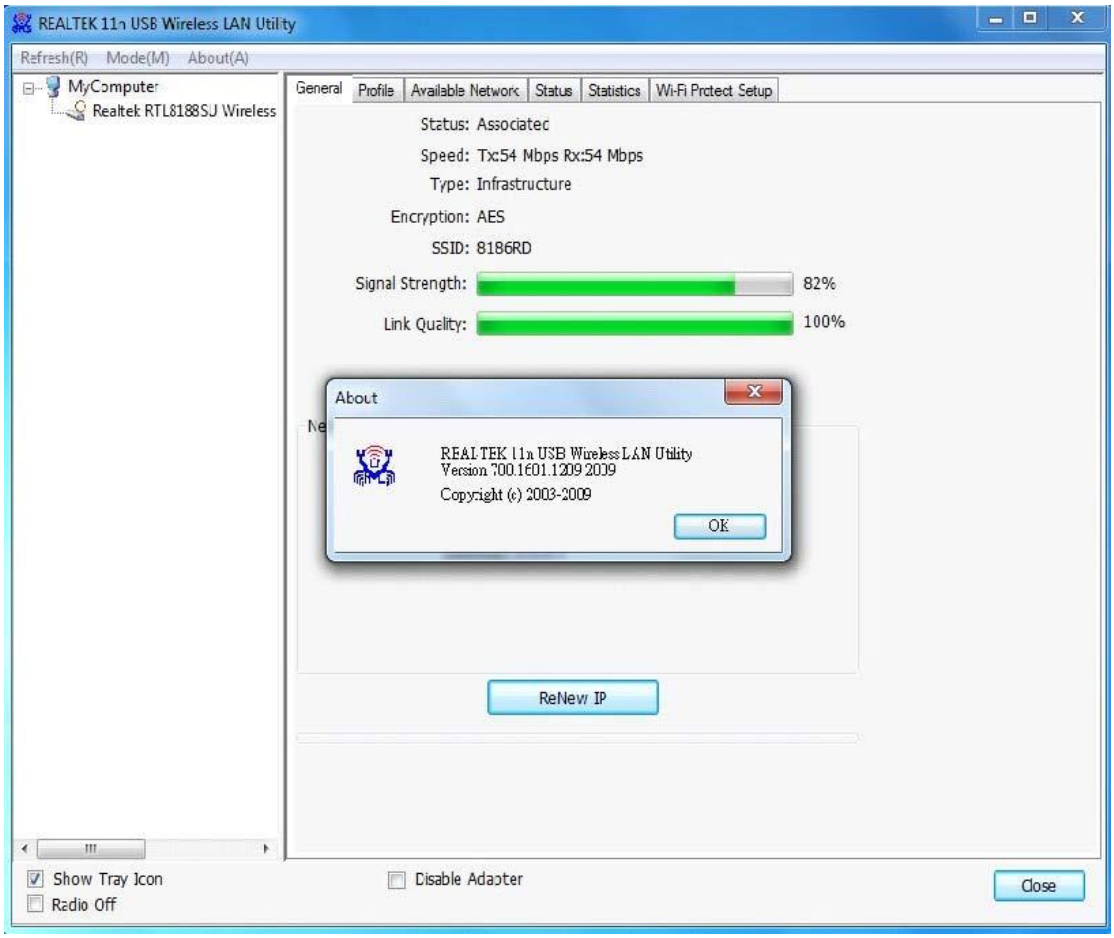
2. Mode (M)

Wireless configuration is quickly switched to be either [Station] or [Access Point].



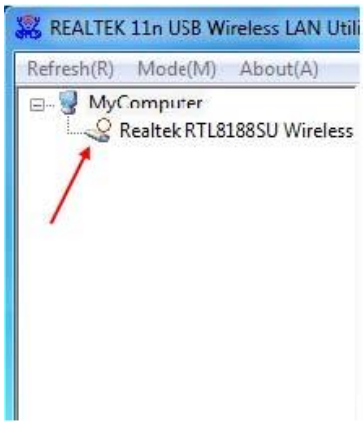
3. About (A)

Click the "About" to show the about dialog. The application version and license information are shown in the about dialog.



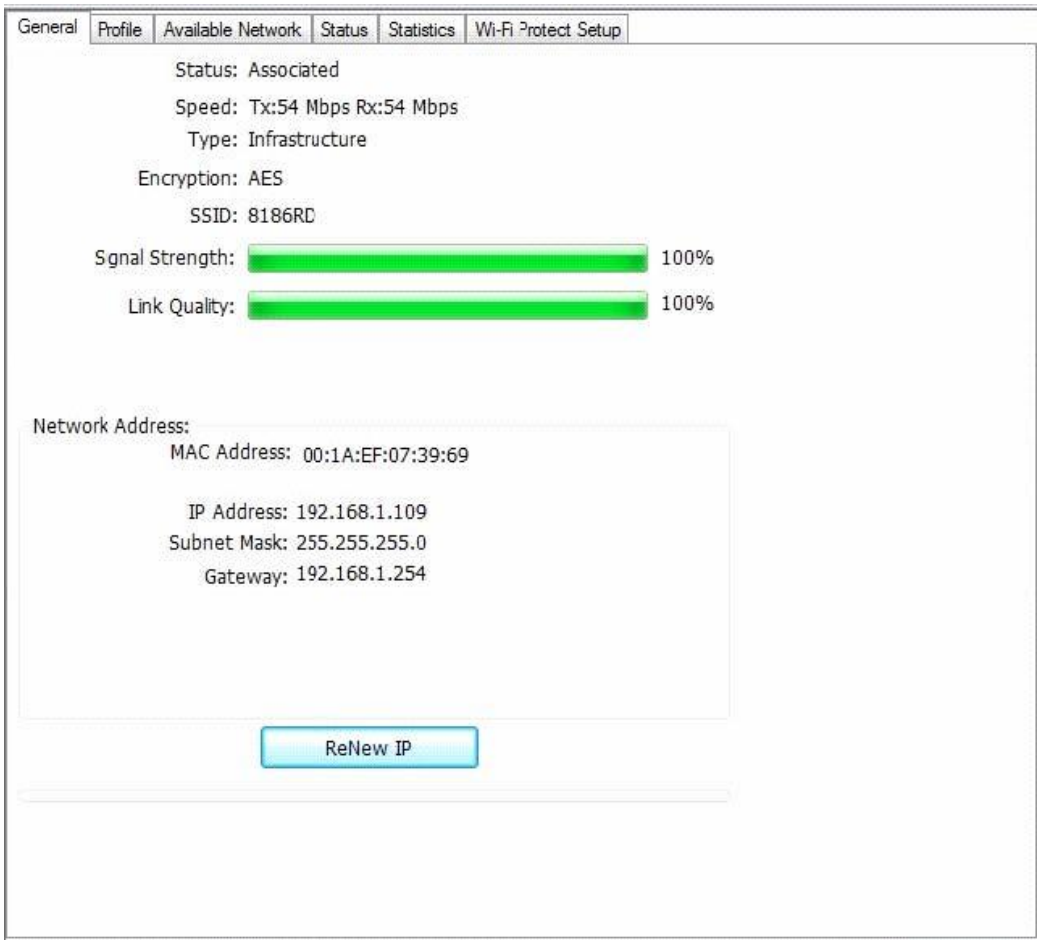
B. Dongle List Area

All connected dongles on this system with multiple dongle installations are displayed in this area. It is easy for users to change the selected adapter by one click. The contents of properties area are depended on wireless configuration that the selected adapter is set up. If only single adapter is installed on the system, only one dongle is always selected.



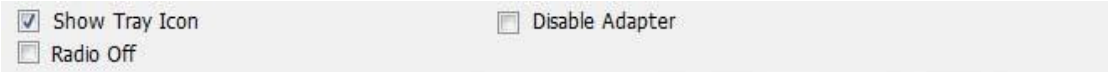
C. Properties Area

The contents of this area are dependent on current wireless configuration. The current configuration is determined on previous explanation of submenu" Mode". The more detailed contents are described in the following wireless configuration sections for both Station and AP mode.



D. Global Control Bar

Each control item on this bar affects the dongle or management GUI directly.



Show Tray Icon

Checking "Show Tray Icon" and clicking “Close” button, the management GUI will be minimized and stay on the tray icon located at the right bottom corner of Windows. If not, management GUI will shut down while clicking "Close" button with unchecked condition.

❑ Client mode utility running but no WLAN dongle plugged.

❑ Client mode utility running and WLAN dongle scan available network.

❑ Client mode utility running and WLAN dongle can't be scanned any AP.

Radio Off

Turn off the radio to save power. While the radio is off, the links with other wireless network modes are disconnected. User should be aware that while the wireless configuration is in AP mode. The radio off will cause the sub network belonging to the AP to be disconnected with internet/intranet.

Disable USB Dongle

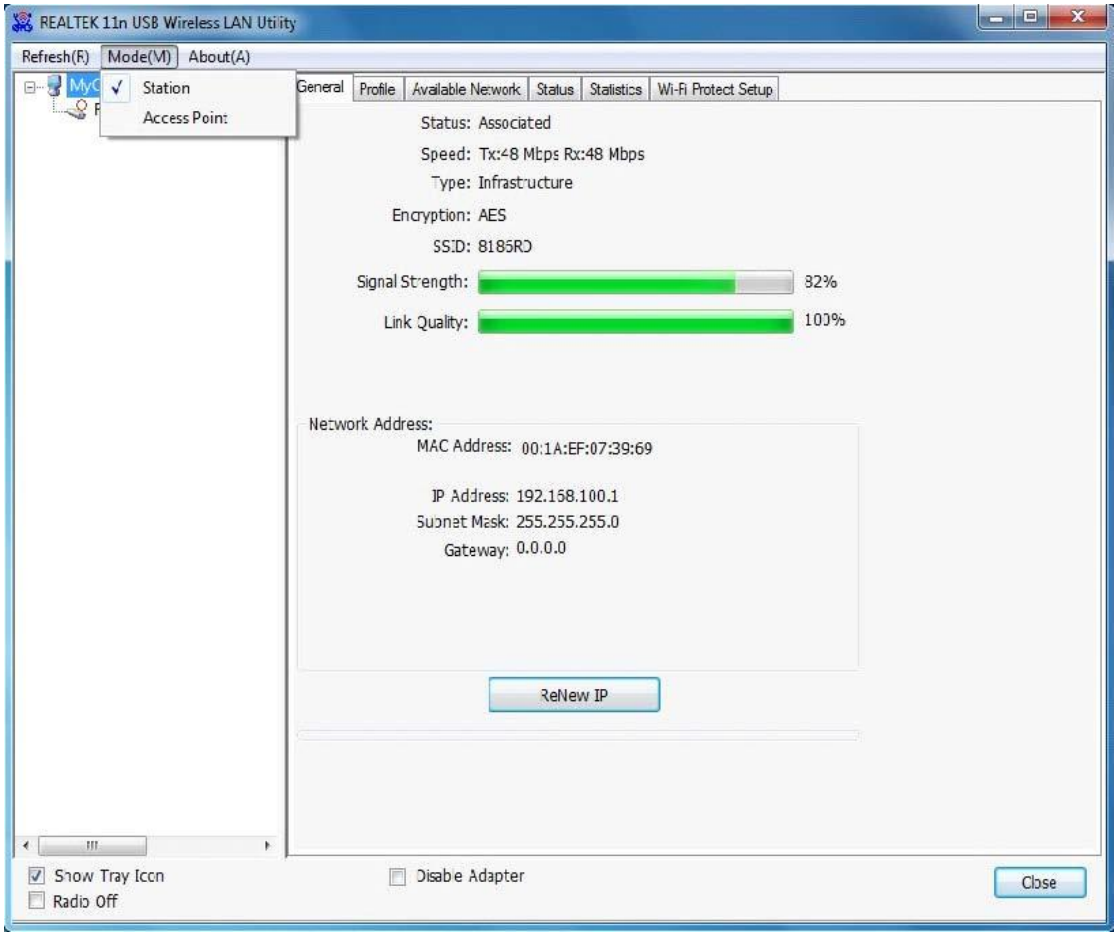
Stop wireless USB device.

Close

Whether to check or uncheck "Show Tray Icon" is to shut down or hide the management GUI.

5.1 Station Mode

The following explanations focus on the properties area.

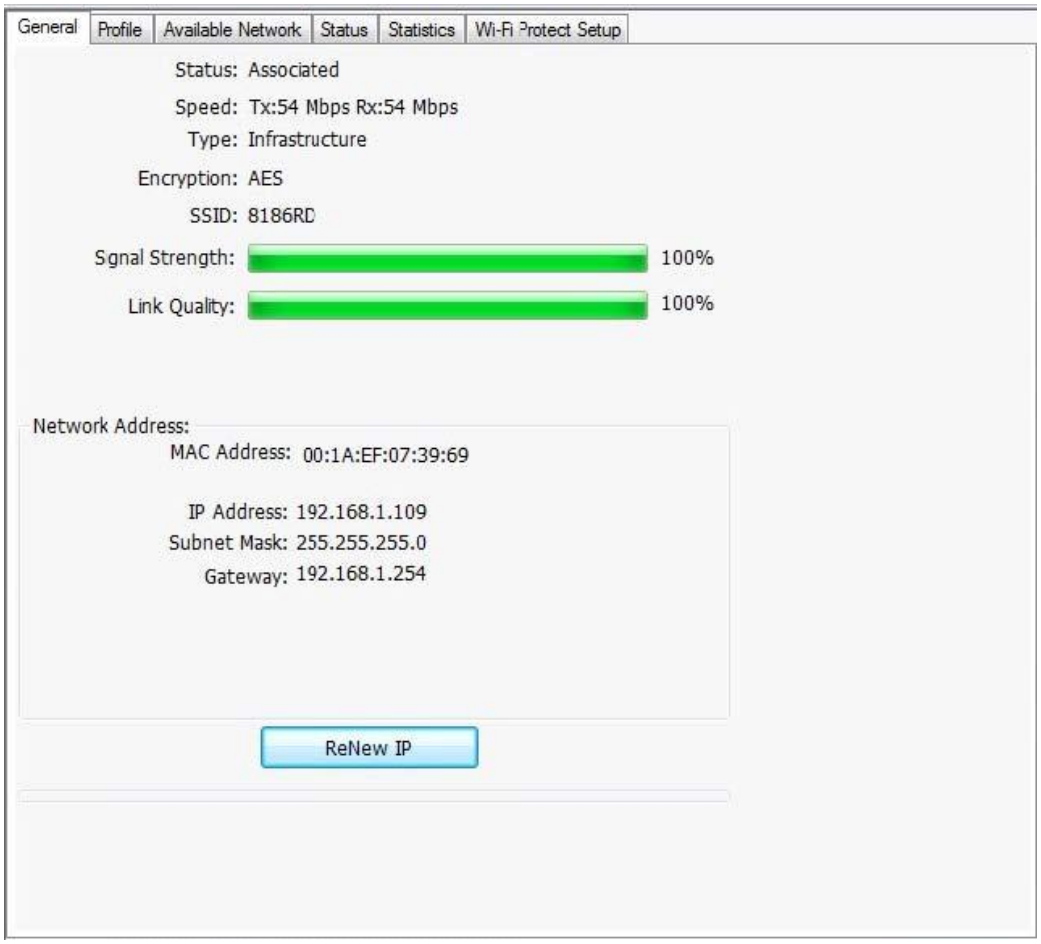


Infrastructure and Ad-Hoc

With both Infrastructure and Ad-Hoc types, the properties should look like the picture above. Six property pages present different information of current wireless network status. Please read the following explanations before you reviewing these pages, it could help you to well understand the wireless environment around the system. It is easy to use to switch property pages just by clicking left button of mouse on the title of each page. The following six sections describe detailed information of each page.

5.2 General Page

This page represents the general information of this dongle.



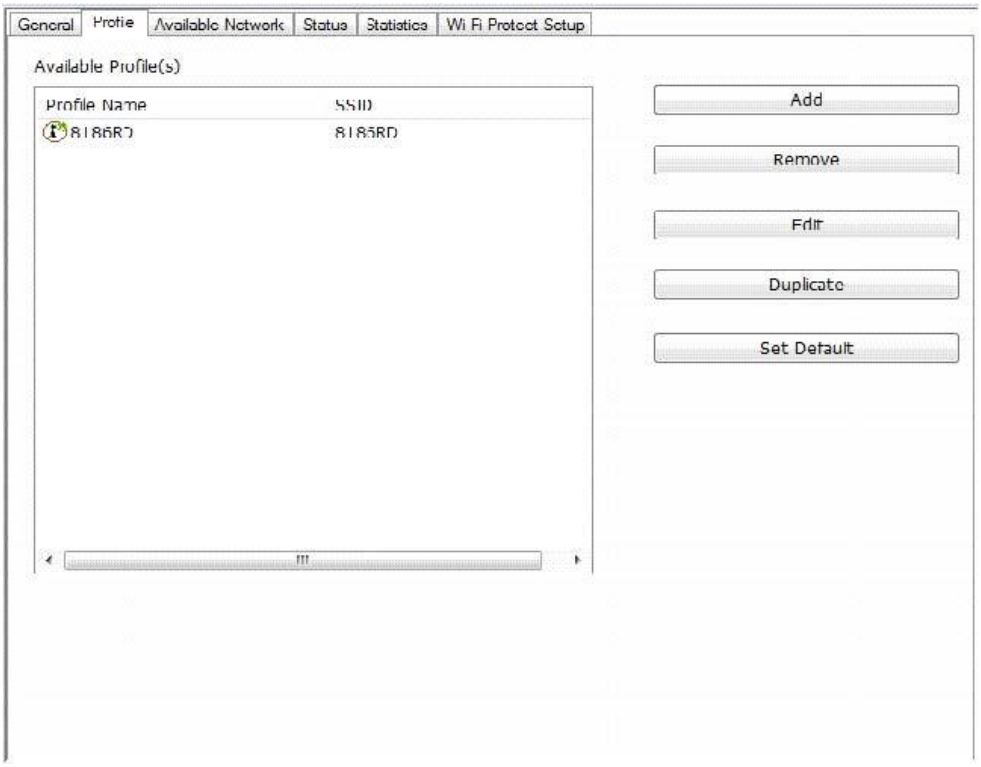
1. Status: The status of station connection to AP.
2. Speed: Current transition speed in Mbps (Mega-Bits-Per-Second).
3. Type: Current wireless LAN configuration type.
4. Encryption: Current encryption mode used.
5. SSID: Name of wireless network.
6. Signal Strength :
   The average signal quality of packets received from wireless network.
   We recommend connecting AP with over 70% signal strength.
7. Throughput Diagram :
   Current throughput, including transmission (Tx) and total traffic (Total).
8. Network Address

- Mac Address: six two-digital number of this Wireless LAN USB adapter
- IP Address: assigned network address by DHCP server or self-definition in four three-digital numbers format.
- Subnet Mask: the only valid value is 2555.255.255.0
- Gateway: It comes from connected AP. Your system can not connect internet with this field empty.

5.3 Profile Page

This page provides profiles management such as add, remove, edit and duplicate just by pressing the respected button.

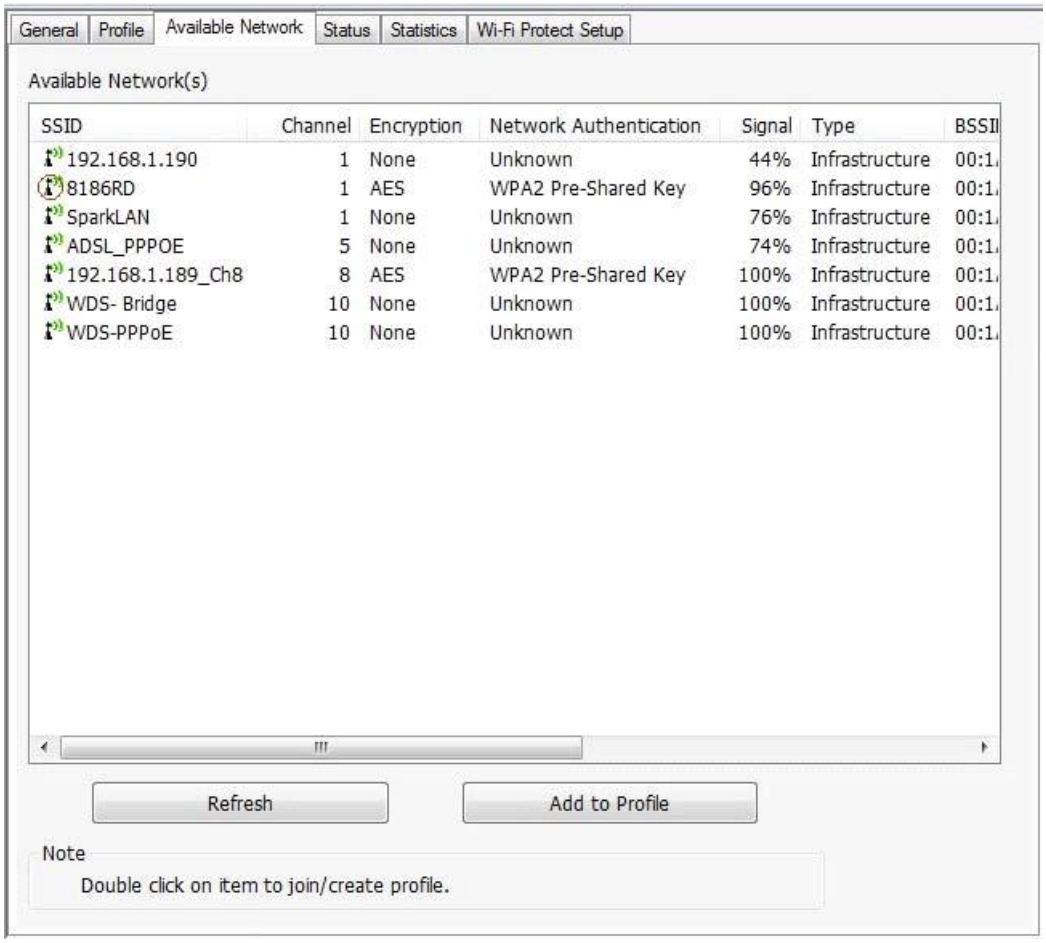
Available Profile(s)
The list box shows all the created profiles.



1. Add: Add a new profile for AP or IBSS (Ad-Hoc mode).
2. Remove: Remove the selected profile.
3. Edit: Edit contents of selected profile.
4. Duplicate: Make copy of selected profile.
5. Set Default: Set the selected profile as default selection.

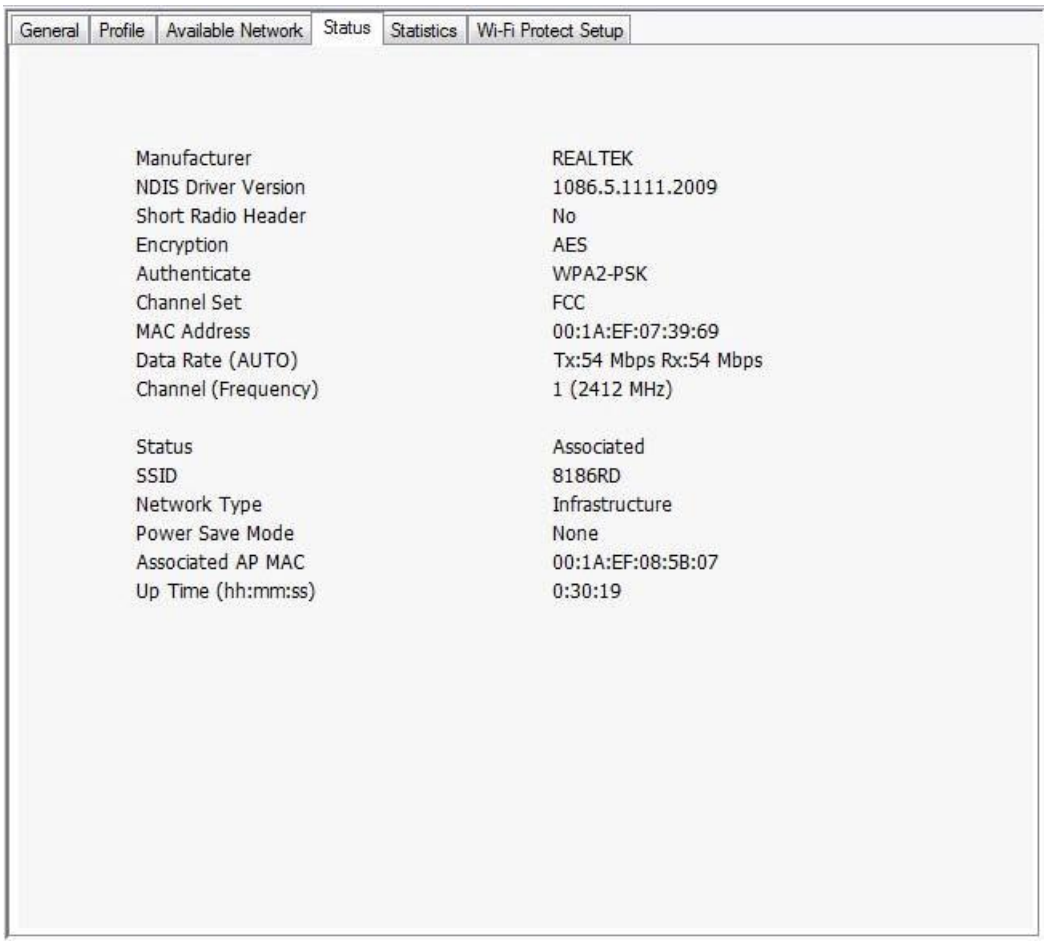
5.4 Available Network

This page presents all BSS, including AP and IBSS, around this system. You can pick any one of these network connections.



1. Refresh: Rescan network connection around this system.
2. Add to Profile :
   Create profile for selected network connection and add it to profile list.

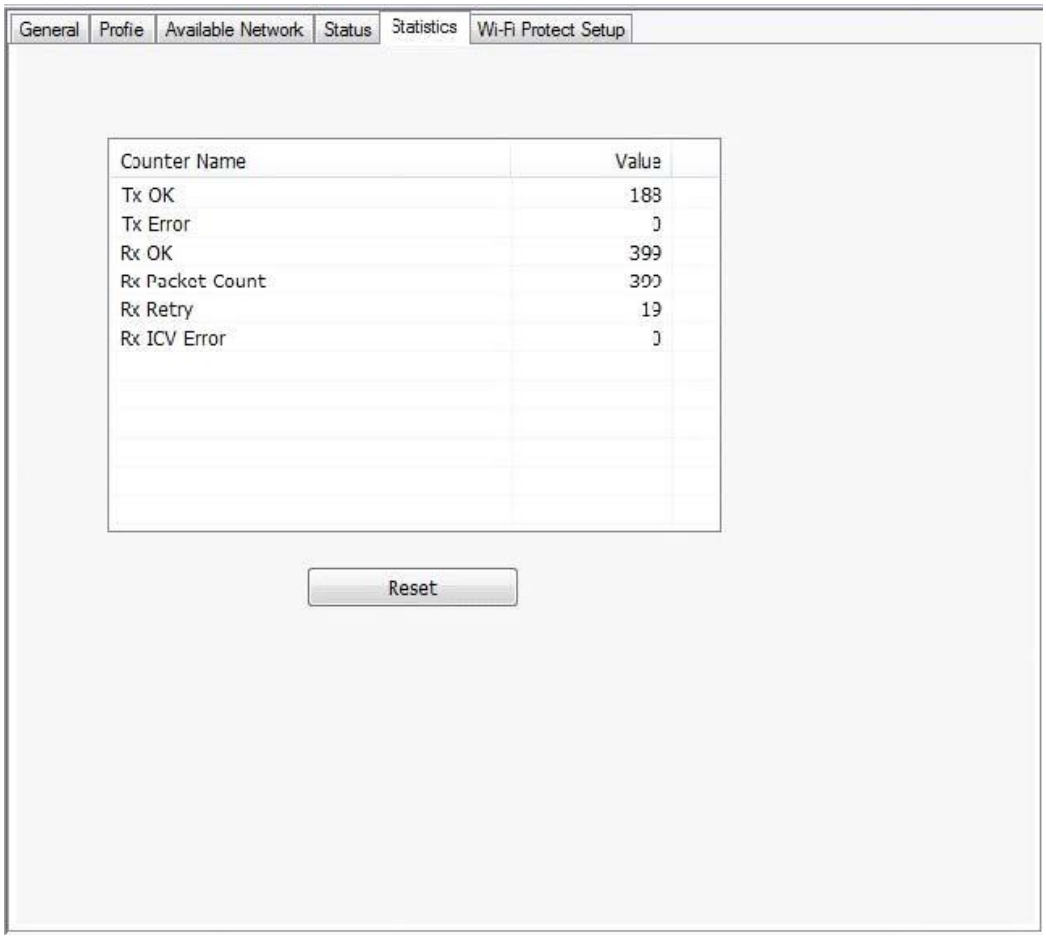
5.5 Status Page



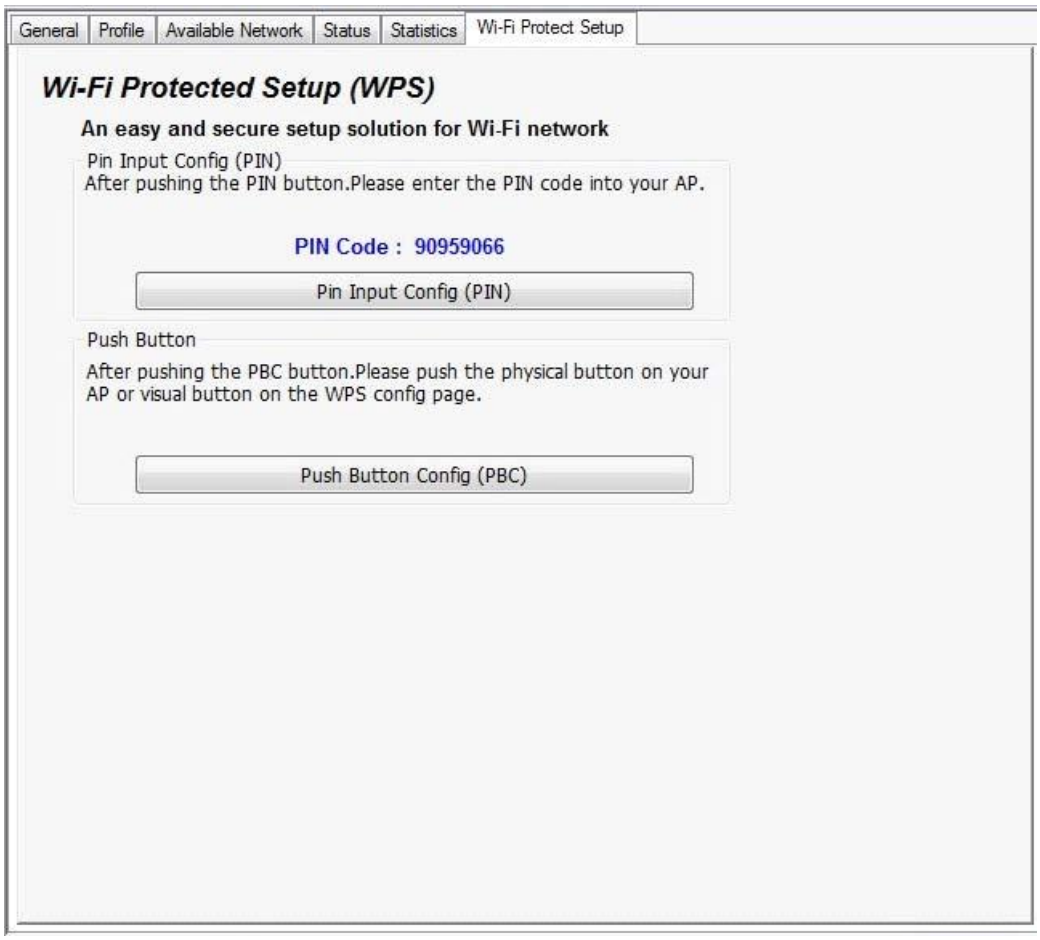
- NDIS Driver Version: Driver version
- Short Radio Header: No
- Encryption: Current encryption mode.
- Authenticate: Authentication state
- Channel Set: Selected channel plan currently.
- MAC Address: MAC address of this adapter.
- Data Rate: Wireless LAN transition speed
- Channel(Frequency): Current channel number
- Status: Wireless network status
- SSID: name of connecting AP
- Network Type: Indicate current network configuration type
- Power Save Mode: Current setting power save mode
- Associated AP MAC: MAC address of connecting AP
- Associated AP IP: IP address of connecting AP
- Up Time: Total connection time

5.6 Statistics Page

You could watch the Tx / Rx status of current wireless connection. This page shows a statistic analysis of packet transition.



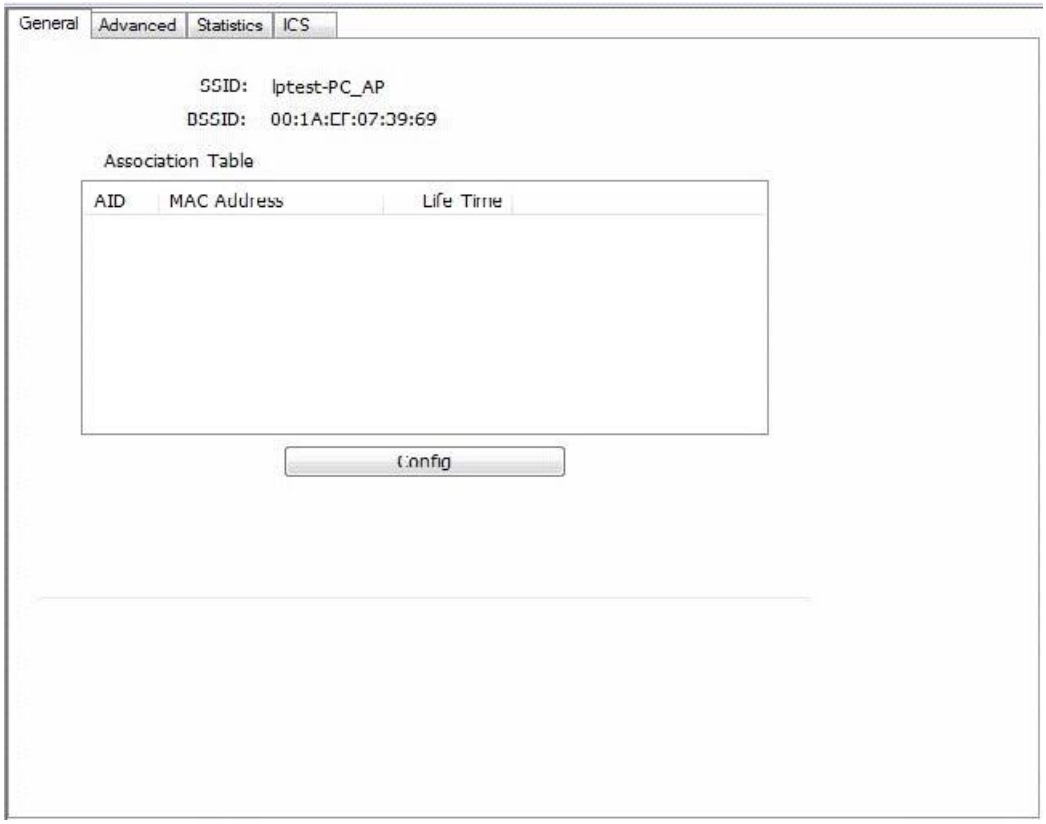
5.7 Wi-Fi Protect Setup


General
Profile
Available Network
Status
Statistics
Wi-Fi Protect Setup
Wi-Fi Protected Setup (WPS)
An easy and secure setup solution for Wi-Fi network
Pin Input Config (PIN)
After pushing the PIN button.Please enter the PIN code into your AP.
PIN Code : 90959066
Pin Input Config (PIN)
Push Button
After pushing the PBC button.Please push the physical button on your AP or visual button on the WPS config page.
Push Button Config (PBC)

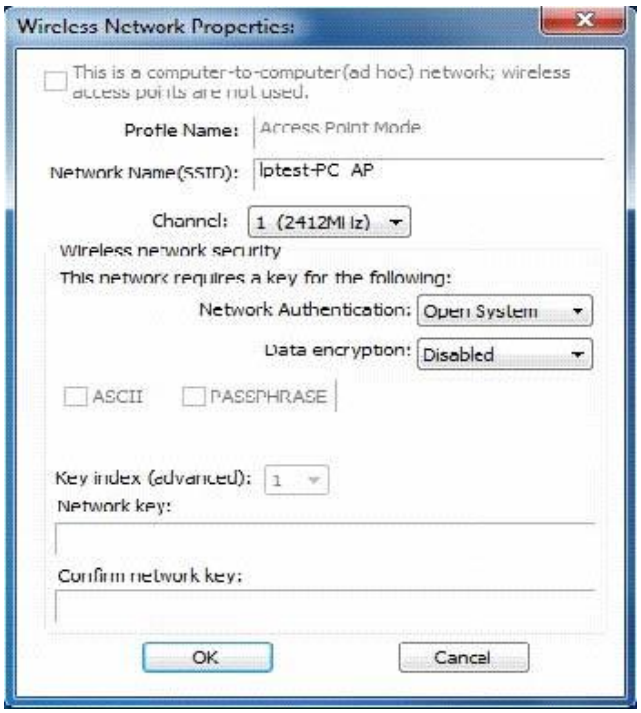
6 Access Point Mode

6.1 General Page

This page provides general information of this AP, including name, MAC address and list of joined stations.



1. SSID: The name of this AP.
2. BSSID: Six two-digital numbers of the MAC address of this AP.
3. Association Table: It is the list of joined stations to this AP.
4. AID (Association ID) :
   The AID field is a value assigned by an AP during association that represents 16-bit ID of a station. It is a unique value assigned by AP.
5. MAC address :
   It is the six two-digit numbers that assemble the MAC address of respected joined station.
6. Life Time :
   It is the timer that counts down from 10 minutes whenever the AP connects the station successfully. If an STA associated to SW AP does not have any interaction with the AP in 10 minutes, it will be disassociated from the Infra-structure BSS.
7. Config: A dialog of this AP is shown for configuration modification.



a. Network Name (SSID) :
Name of the AP is searchable by other wireless modes. The length of SSID should be shorter than 32 characters.

b. Channel: Select the wireless channel within current channel plan.

c. Network Authentication & Data Encryption :

- Open System :
It is combined with data encryption type to be WEP or to be disabled. Disabled: you decide to open this AP to every one without network authentication. WEP: you decide to setup the basic data encryption with a defined network key.
- Shared Key + WEP :
You decide to apply both authentication and data encryption to prevent unauthorized login.
- WPA-PSK + TKIP & WPA2-PSK + TKIP :
The most advanced authentication and data encryption that provide the best security protection.

d. ASCII / PASSPHRASE :

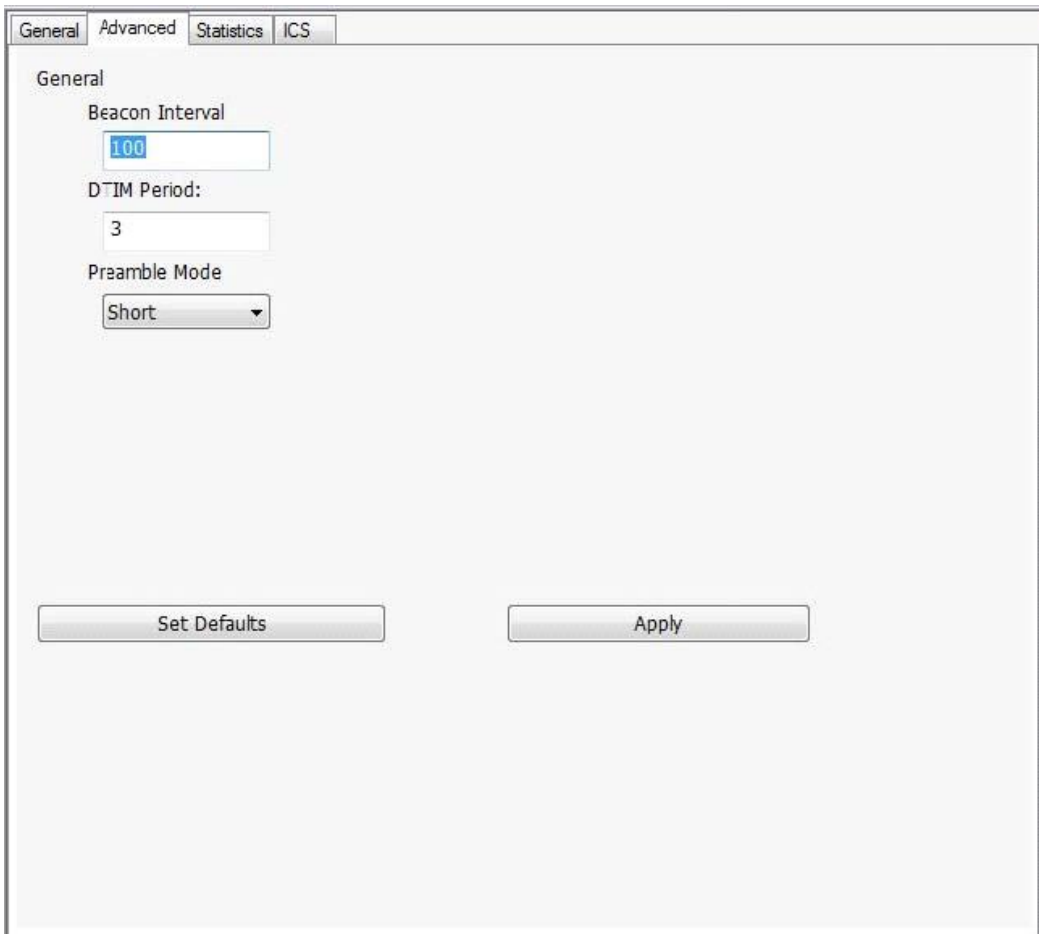
- ASCII :
You should provide either 5 or 13 ASCII characters on Network key edit box.
- PASSPHRASE : You could input words on Network
- Key edit box :
64 bits: The generated pass key is 64-bit to be complied with data packets. 128 bits: The generated pass key is 128-bit to be complied with data packets.
- Hexadecimal :
While both ASCII and PASSPHRASE are not checked, you should input hexadecimal number in the network key box. For example, 10 digits hex number for 64-bit WEP or 26 digits hex number for 128-bit WEP.

e. Key index (advanced) (1 ~4) :

At most four key index to represent the opposite network key.

6.2 Advanced Page

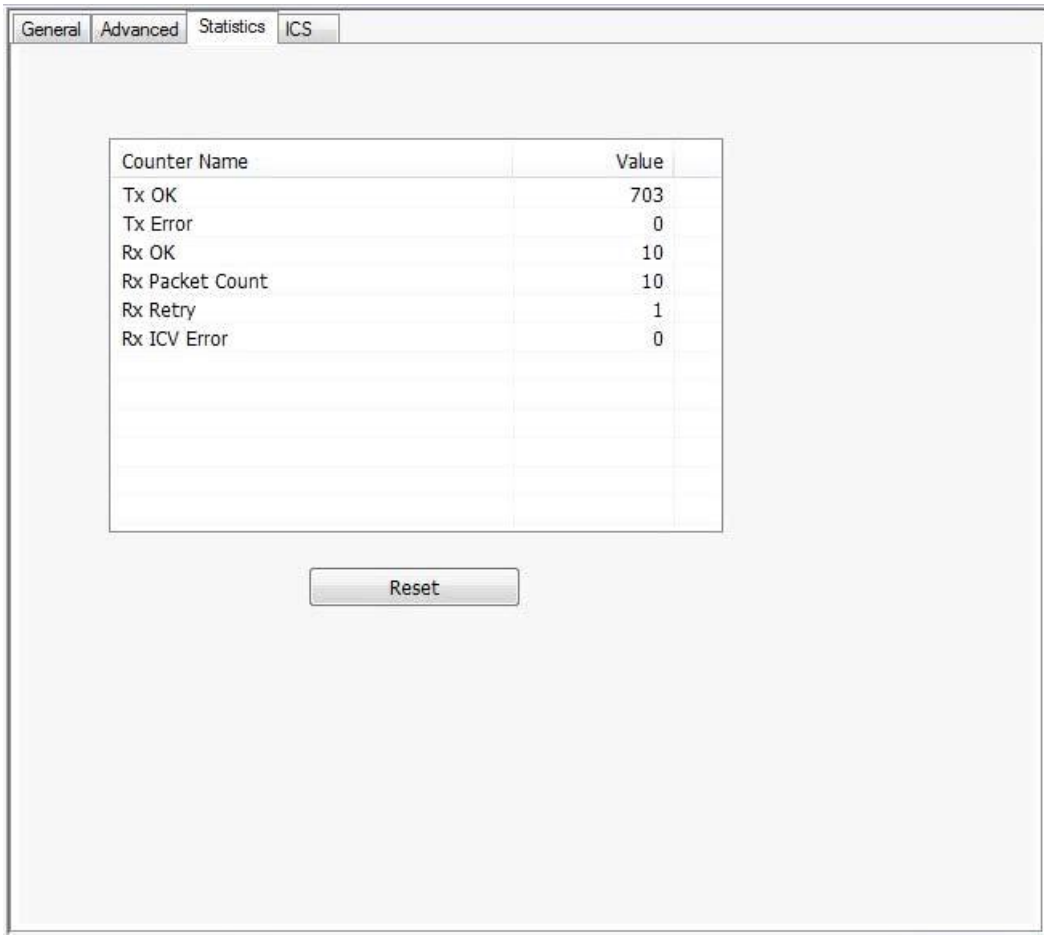
Users could setup the advanced characteristics of network packet for transmission on this page.



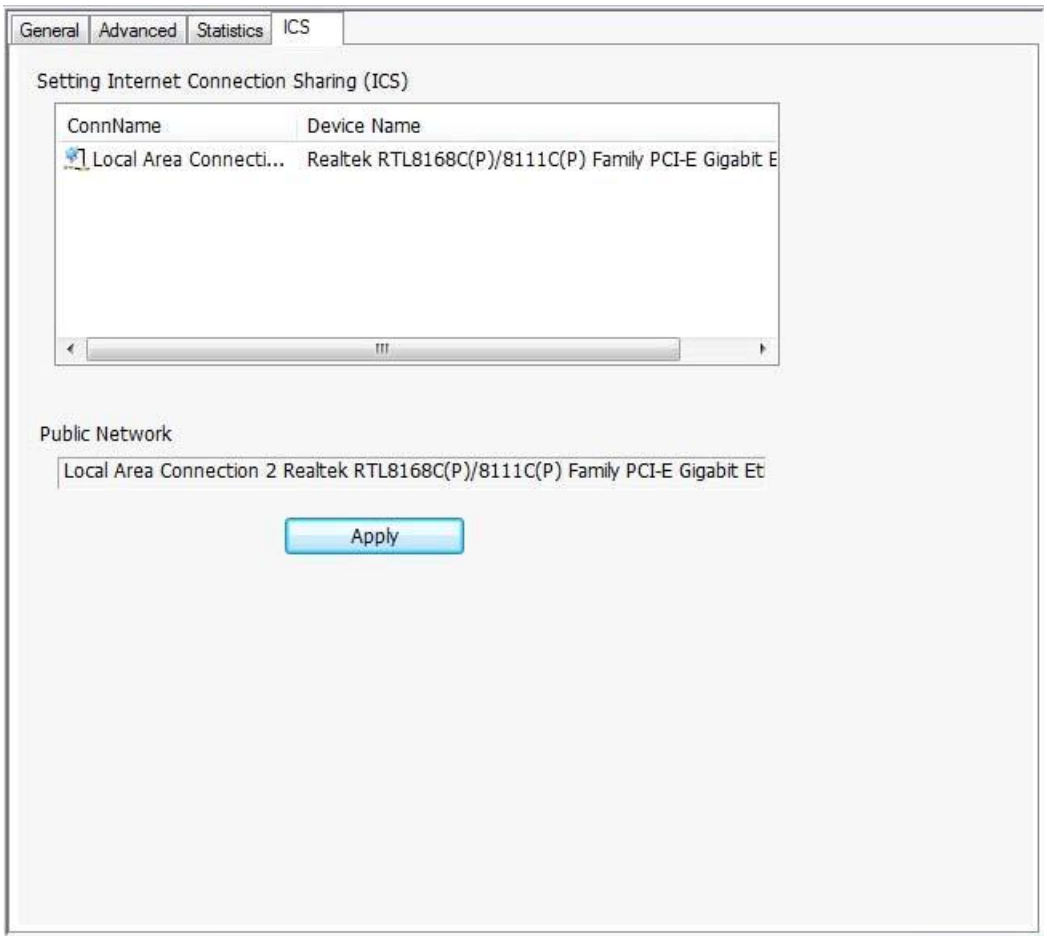
1. Beacon Interval :
   This filed indicates the interval between each beacon that this AP sends out in unit of TU (1024 micro-seconds).
2. DTIM Period :
   The DTIM Period field is the number of Beacon intervals between successive DTIMs.
3. Preamble Mode :
   - Long: higher quality but with lower performance than preamble short mode.
   - Short: Normal quality but with higher performance then preamble long mode.
   - Auto: select the proper preamble mode by current signal frame information.

6.3 Statistics Page

The Tx / Rx status of current wireless connection is shown. A statistical analysis of packet transition is listed.


General
Advanced
Statistics
ICS
Counter Name
Value
Tx OK
703
Tx Error
0
Rx OK
10
Rx Packet Count
10
Rx Retry
1
Rx ICV Error
0
Reset

6.4 ICS Page



1. ConnName :
   List all network connections to this system.
   You can pick up one from the listed item(s) whose network domain you would want to connect to.
2. Select: Make the desired network connection to public network.
3. ICS :
   Internet Connection Sharing.
   It enables this AP to create the domain to share this internet/intranet network connection.
4. Firewall :
   Any of a number of security scheme that prevents unauthorized users from gaining access to a computer network, or that monitors transfers of information to and from the network.
   Apply: Execute the current settings.